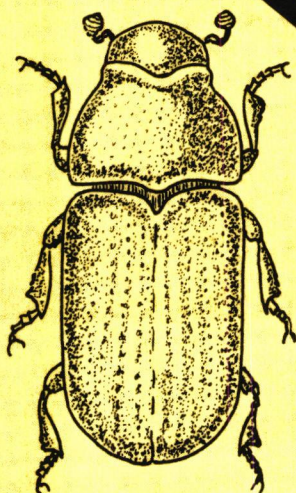


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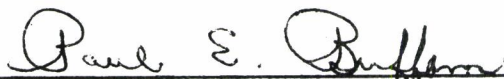
BIOLOGICAL EVALUATION
Western Tent Caterpillar

Mt. Lemmon
Santa Catalina District
Coronado National Forest
Arizona

Forest Insect and Disease Management Branch
Division of Timber Management
Southwestern Region, USDA, Forest Service
517 Gold Avenue, SW
Albuquerque, New Mexico 87101

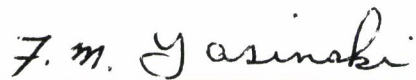
April 1972

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The western tent caterpillar population on Mt. Lemmon was evaluated on March 29, 1972, by entomologists Bob Frye and Paul Buffam. The present infestation was first detected in the spring of 1971 when several egg masses were found on aspen near the ski area. Defoliation in 1971 ranged from light to moderate, with some trees being completely stripped. The trend for 1972 is generally up, with moderate to severe defoliation anticipated. No control is recommended because of the small size and scattered nature of the aspen stands on Mt. Lemmon.

GENERAL INFORMATION

Location.--Near top of Mt. Lemmon, Santa Catalina District, Coronado National Forest, Arizona. Mt. Lemmon is a high-use recreation area northeast of Tucson.

Insect.--A western tent caterpillar, Malacosoma californicum (Packard).

Host.--Quaking aspen, Populus tremuloides Michx. Stands of this species range in size from less than 1 acre to 10 acres, and are scattered about near the top of Mt. Lemmon.

History of Outbreak.--In early 1971, a few egg masses were found on young aspen east of the ski area. In the summer of 1971, defoliation was detected in most aspen stands on the mountain. Most trees had been lightly to moderately defoliated. Some had been almost entirely defoliated. No tree killing has occurred to date; however, a few limbs on some of the older trees have been killed.

1972 EGG MASS SURVEY

Methods.--Two 30-inch branch samples were cut from the mid- to upper crowns of randomly selected aspen at four different areas. The branch samples were examined and the number of new and old egg masses counted and recorded.

Results.--Table 1 summarizes the results of the 1972 egg mass survey. Generally, the trend of the population is up, with moderate to severe defoliation expected this summer.

Table 1.--Results of a March 29, 1972, egg mass evaluation of the western tent caterpillar infestation on Mt. Lemmon, Santa Catalina District, Coronado National Forest, Arizona.

Location	No. trees	Ave. No. egg masses per 2 30-in. branches		Trend	Projected defoliation
		New	Old		
Top of Mt. Lemmon	10	1.2	1.8	Static	Moderate
$\frac{1}{2}$ Mi. East of Ski Area	5	3.0	0.8	Up	Severe
Summerhaven	5	1.6	0.4	Up	Moderate
1 Mi. NW of Soldier Camp	5	1.2	0.4	Up	Moderate
	<u>25</u>	<u>1.64</u>	<u>1.04</u>	<u>Up</u>	<u>Moderate</u>

DISCUSSION AND RECOMMENDATIONS

The aspen stands on Mt. Lemmon are quite small and scattered. Because of this, we do not recommend any direct control measures. Some tree killing may occur before the infestation subsides due to natural causes, but the total impact on all resources should be small. The aesthetic beauty of some parts of the mountain might be reduced for short periods during the summer. Also, the caterpillars might become a nuisance when they migrate to find new sources of food or pupation sites. This habit could impair the recreation experience for small periods of time for people using trails and recreation sites within or adjacent to aspen stands.

We recommend that cocoons of this pest be collected in the summer of 1972 by Forest Insect and Disease Management Branch personnel and placed in rearing, so that parasitism can be evaluated. Parasitism of tent caterpillar larvae and pupae at Sabino Canyon at the base of Mt. Lemmon has helped reduce the population and subsequent defoliation significantly.